

MAQTQGTRRKVCYYDGDVGNYYYGGQHPMKPHRIRMTHNLLLN
YGLYRKMEIYRPHKANAEEMTKYHSDDYIKFLRSIRPDNMSEYSKQMQRFNVEDCPV
FDGLFEFCQLSTGGSVASAVKLNKQQTDI AVNWAGGLHHAKKSEASGFCYVNDIVLAI
LELLKYHQRVLYIDIDIHHGDGVEEAFYTTDRVMTVSFHKYGEYFPGTGLRDI GAGK
GKYYAVYPLRDGIDDES YEAFKFPVMSKVMEMFQPSAVVLQCGSDSLSGDRLGCFNL
TIKGHAKCVEFVKSFNLPMLMLGGGYTIRNVARCWTYETAVALDTEIPNELPYNDYF
EYFGPDFKLHISPSNMTNQNTNEYLEKIKQRLFENLRMLPHAPGVQMQAIPEDAIP EE
SGDEDEDDPKRISICSSDKRIACEEEFFSDSEEEGEGGRKNSSNFKKAKRVKTEDEKE
KDPEEKKEVTEEEKTKEEKPEAKGVKEEVKLA (SEQ ID NO:1)

FIG. 1A

1 atgtctgggg tctctgcccg ctggtgctgc tgtctcccac tcggtcatcc tgagaacaca
61 gcctgagcgr ctctgtcact cggggtagac cagcgggga cgcgagcaag atgggcgaga
121 cgcagggcac ccgaggaaa gtctgttact actacgacgg ggatgttga aattactatt
181 atggacaagg ccacccaatg aagcctcacc gaatccgcat gactcataat ttgctgctca
241 actatggtct ctaccgaaaa atggaatatct atgcacctca caagccaat gctgaggaga
301 tgaccaagta ccacagcgat gactacatta aattcttgcg ctccatccgt ccagataaca
361 tgtcggagta cagcaagcag atgcagagat tcaacgttgg tgaggactgt ccagtattcg
421 atggcctgtt tgagtcttgt cagttgtcta ctggtggttc tgtggcaagt gctgtgaaaac
481 ttaataagca gcagacggac atcgccgtga atggtgctgg ggccctgcac catgcaaaaga
541 agtccgaggc atctggcttc tgttacgtca atgatatcgt cttggccatc ctggaactgc
601 taaagtatca ccagagggtg ctgtacatbg acattgatat tcaccatggt gacggcgtgg
661 aagaggcctt ctacaccacg gaccgggtca tgactgtgtc ctttcataag tatggagagt
721 acttcccagg aactggggac ctacgggata ccgggctgg caaagacaag tattatgctg
781 ttaactaccg gctccgagac gggattgatg acgagtccta tgaggccatt ttcaagccgg
841 tcatgtccaa agtaatggag atgttccagc ctagtgcgtt ggtcttacag tgtggctcag
901 actccctatc tggggatcgg tttaggttgc tcaatctatc tatcaaaagg cacgccaaat
961 gtgtggaatt tgtcaagagc tttaacctgc ctatgctgat gctgggaggg cgtgggttaca
1021 ccattcgtaa cgttgcccgg tgctggacat atgagacagc tgtggccctg gatacggaga
1081 tccctaataga gcttccatag actaaccaga ttgaatactt tggaccagat ttcaagctcc
1141 acatcagtc cccaatag actaaccaga acacgaatga gtacctggag aagatcaaac
1201 agcgactgtt tgagaaccctt agaattgctgc cgcacgcacc tggggtccaa acgcaggcga
1261 ttcctgagga cgccatccct gaggagagtg gcgatgagga cgaagacgac cctgacaaagc
1321 gcatctcgat ctgctcctct gacaaacgaa ttgcctgtga ggaagagtcc tccgattctg
1381 aagaggaggg agaggggggc cgcaagaact ctccaactt caaaaaagcc aagagagtca
1441 aaacagagga tgaaaaagag aaagacccag aggagaagaa aggaatcacc gaagaggaga
1501 aaaccaagga ggagaagcca gaagccaaag ggttcaagga ggaggccaag ttggcctgaa
1561 tggaccctct cagctctggc ttcctgctga gtccctcacg tttctttccc c (SEQ ID NO:2)

FIG. 1B

MAYSQGGGKKCKVCYYYDGDIGNYYYGGQHPMKPHRIRMTNLLL
NYGLYRKMEIYRPHKATAEEMTKYHSDEYIKFLRSIRPDNMSEYSKQMHIPFNVGEDCP
AFDGLFEFCQLSTGGSVAGAVKLNRRQQTDMAVNWAGGLHHAKKYEASGFCYVNDIVLA
ILELLKYHQRVLYIDIDIHHRGDGVEEAFYTTRVMTVSFYGEYFPGTGLRDIGAG
KGKYAVNFFPMCDGIDDESYGQIFKPIISKVMEYQPSAVVLQCGADSLSGDRLGCFN
LTVKGHAKCVEVVKTFNLP LLMLGGGYTILRNVARCWTYETAVALDCEIPNELPYNDY
FEYFGPDFKLHISPSNMTNQNTPEYMEKIKQRLFENLRMLPHAPGVQMQAIPEDAVHE
DSGDEGEDPDKRISIRASDKRIACDEEFSDEGEGRNVADHKKGAKARIEED
KKETEDKKTVDKEEDKSKDNSGEKTDTKGKSEQLSNP (SEQ ID NO:3)

FIG. 2A

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1  cgccgagctt  tggcacctc  tccgggtgg  taccgagcct  tccggcgcc  ccctcctctc
61  ctcccacgg  cctgccctc  ccgcgggac  tatcgcccc  acgtttccct  cagccctttt
121 ctctcccgc  cgagccgcg  cgcagcagc  agcagcagca  gcagcaggag  gaggagcccc
181 gtggcgggc  tggcgggga  gccatggcg  tacagtcaag  gagcgggcaa  aaaaaaagtc
241 tgctactact  acgacggta  tatggaaat  tattattatg  gacagggtca  tcccatgaag
301 cctcatagaa  tccgcatgac  ccataactg  ctgttaaatt  atggcttaca  cagaaaaatg
361 gaaatatata  ggcccataa  agccactgc  gaagaaatga  caaaatatca  cagtgatgag
421 tataatcaat  ttctacggtc  aataagacca  gataacatgt  ctgagtatag  taagcagatg
481 catatatata  atgttggaga  agattgtcca  gcgtttgatg  gactctttga  gttttgtcag
541 ctctcaactg  gcggttcagt  tgctggagct  gtgaagttaa  accgacaaca  gactgatatg
601 gctgttaatt  gggctggagg  attacatcat  gctaagaaat  acgaagcatc  aggatcctgt
661 tacgttaatg  atatgtgct  tgccatcctt  gaattactaa  agtatcatca  gagagtctta
721 tatatcgata  tagatatcca  tcatgggtgat  ggtgtcgaag  aagcttttta  tacaacagat
781 cgtgtaatga  cggtatcatt  ccataaatat  ggggaatact  ttctggcac  aggagacttg
841 agggatatgg  gtgctggaaa  aggcaaatat  tatgctgtca  atttccaat  gtgtgatggt
901 atagacgatg  agtcatatgg  gcagatatat  aagcctatta  tctcaaagg  gatggagatg
961 tatcaaccct  gtgctgtggt  attacagtgt  ggtgcagact  cattatcttg  tgatagactg
1021 ggttgtttca  atctaacagt  caaagggtcat  gctaaatgtg  tagaagtgtt  aaaaactttt
1081 aacttaccat  tactgatgct  tggaggaggt  ggtacacaa  tccgtaatgt  tgctcgatgt
1141 tggacatatg  agactgcagt  tgcccttgat  tgtgagattc  ccaacgagtt  gccatataat
1201 gattactttg  agtattttgg  accagacttc  aaactgcata  ttagtccttc  aaacatgaca
1261 aaccagaaca  ctccagaata  tacggaaaag  ataaaacagc  gtttgtttga  aaatttgcg
1321 atgttacctc  atgcacctgg  tgccagatg  caagctattc  cagaagatgc  tgttcatgaa
1381 gacagtggag  atgaagatgg  agaagatcca  gacaagagaa  ttcttatctg  agcatcagac
1441 agcgggatag  ctgtgatga  agaattctca  gattctgagg  atgaaggaga  aggaggtcga
1501 agaaatgtgg  ctgatcataa  gaaaggagca  aagaaagcta  gaattgaaga  agataagaaa
1561 gaaacagagg  acaaaaaaac  agacgttaag  gaaagaagata  aatccaagga  caacagtgg
1621 gaaaaaacag  ataccaaaag  aaccaaaatca  gaaacagctca  gcaacccctg  aatctgacag
1681 tctcaccaat  ttcagaaaat  catlaaaaag  aaaatatgga  aaggaaaaatg  tttctttttt
1741 gaagacttct  ggcttcattt  tatactactt  tggcatggac  tgtattttat  ttcaaatggg
1801 actttttcgt  ttttgttttt  ttttgttttt  ttttgttttt  gatatttctaa  ttatgaagca
1861 aaattttctt  tctccacctt  ctgtatctat  atagtattta  aaattgatgt  gagttattat
1921 gtcaaaaaaa  ctgatctatt  aagaagtaa  ttggcctttc  tgagctgaaa  aaaaaaaa
1981 aaaag (SEQ ID NO:4)

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FIG. 2B


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1  ggaattcgcg gccgcggcgg ggcggggagg tgcggggcct gctccgcgg gaccatggc
61  caagaccgtg gccatatctt cccatcgcc atcgctctca accatgact tccactag
121 ccctatgaag cccatcgcc atcgctctca accatgact tccactag gactggaca
181 taagaagatg atcgctctca accatgact tccactag gactggaca gactggaca
241 ctccgaggac tacattgact atcgctctca accatgact tccactag gactggaca
301 caagagtctt aatgccctca accatgact tccactag gactggaca gactggaca
361 gtctgctcgg cgttacacag cgttacacag cgttacacag cgttacacag cgttacacag
421 ctgtgatatt gccattaaact gccattaaact gccattaaact gccattaaact gccattaaact
481 tggcttctgc tatgtcaacg tatgtcaacg tatgtcaacg tatgtcaacg tatgtcaacg
541 tgggtgctc tacattgaca tacattgaca tacattgaca tacattgaca tacattgaca
601 cctcactgac cgggtcatga cgggtcatga cgggtcatga cgggtcatga cgggtcatga
661 cacaggtagc atgtatgaag atgtatgaag atgtatgaag atgtatgaag atgtatgaag
721 cctgcgggat ggcattgatg ggcattgatg ggcattgatg ggcattgatg ggcattgatg
781 gtagtggac ttctaccaac ttctaccaac ttctaccaac ttctaccaac ttctaccaac
841 ctgtgatcga ttgggtgctt ttgggtgctt ttgggtgctt ttgggtgctt ttgggtgctt
901 tgtcaagagc ttcaatatcc ttcaatatcc ttcaatatcc ttcaatatcc ttcaatatcc
961 tgtgcccgc tgcgggacat tgcgggacat tgcgggacat tgcgggacat tgcgggacat
1021 gcttccctat agtgaatact agtgaatact agtgaatact agtgaatact agtgaatact
1081 cagcaccgc atcgagaatc atcgagaatc atcgagaatc atcgagaatc atcgagaatc
1141 ctttgaaaac ctgaagatgc ctgaagatgc ctgaagatgc ctgaagatgc ctgaagatgc
1201 agacctcctg acctacgaca acctacgaca acctacgaca acctacgaca acctacgaca
1261 gaactatagc aggcagagg aggcagagg aggcagagg aggcagagg aggcagagg
1321 gaaagcgat gtggagattt gtggagattt gtggagattt gtggagattt gtggagattt
1381 cactcttgg aagggttgg aagggttgg aagggttgg aagggttgg aagggttgg
1441 ggggcttttg ctgactctgg ctgactctgg ctgactctgg ctgactctgg ctgactctgg
1501 cctgcttttc ctctctctcc ctctctctcc ctctctctcc ctctctctcc ctctctctcc
1561 caaggatagc tatctgggac tatctgggac tatctgggac tatctgggac tatctgggac
1621 ttgcccctta ttcttccct ttcttccct ttcttccct ttcttccct ttcttccct
1681 agacaaggac tgagattgcc tgagattgcc tgagattgcc tgagattgcc tgagattgcc
1741 ccttgcttcc aggaagatg aggaagatg aggaagatg aggaagatg aggaagatg
1801 ctgaatccca gatgatgga gatgatgga gatgatgga gatgatgga gatgatgga
1861 ctctcacttt tggctttatg tggctttatg tggctttatg tggctttatg tggctttatg
1921 attttttgta cctttgatgg cctttgatgg cctttgatgg cctttgatgg cctttgatgg

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FIG. 3B

MLAMKHQQELLEHQKLERHRQEQELEKQHQHREQLQQLKNKEKG
KESAVASTEVMKQLQEFVLNKKKALAHPNLNHCISSCPRIWYGKTQHSSLDQSSPPQS
GVSTSYNHPVLGMYDAKDDFPLRKTASEPNLKLRSRLKQKVAERRSSPLLRRKDGPPV
TALKRRPLDVTDSACSSAPGSGPSSPNNSSGVSVAENGIAPAVPSIPAETSLAHLVA
REGSAAPLPLYTSPSLPNITLGLPATGPSAGTAGQDTERLTLPALQQRLSLFPGTHL
TPYLSPLERDGGAAHSPLLQHMVLLQPPAQAAPLVTLGLALPLHAQSLVGADRVSP
SIHKLRQHRPLGRTQSAPLPQNAQALQHLVIOQQHQQFLEKHKQQFQQQQQLQMNKIIP
KPSEPARQPESHPEETEEELREHQALLDEPYLDRLPGQKEAHAQAGVQVKQEPESDE
EEAEPREVEPGQRQPSQELLFRQQALLLEQQRIHQLRNYQASMEAAGIPVSFGGHR
PLSRAQSSPASATFPVSVQEPPTKPRFTTGLVYDTLMLKHQCTCGSSSSHPEHAGRIQ
SIWSRLQETGLRGKCECIRGRKATLEELQTVHSEAHLLYGTNPLNRQKLDKSKLLGS
LASVFVRLPCGGVGVDSDTIWNEVHSAGAAARLAVGCVVELVFKVATGELKNGFAVVRP
PGHHAEESTPMGFCYFNSVAVAAKLLQQRLSVSKILLIVDWDVHHGNGTQQAFYSDDPSV
LYMSLHRYDDGNFFPGSGAPDEVGTGPGVGFNVNMAFTGGLDPPMGDAEYLAAFRTVV
MPIASEFAPDVVLASSGFDAVEGHPTPLGGYNLSARCFGYLTKQLMGLAGGRIVLALAE
GGHDLTAICDASEACVSALLGNELDPLPEKVLQQRPNANAVRSMEKVMETHSKYWRCL
QRTTSTAGRSLIEAQTCENEEAETVTAMASLSVGVKPAEKRPDEEPMEEEPPL (SEQ ID NO:7)

FIG. 4B-1
FIG. 4B-2
FIG. 4B-3
FIG. 4B-4
FIG. 4B-5

FIG. 4B

1 ggaggttgtg gggcgccgc cgggagcac cgtccccgc cgcgccgcg ggcgccgcg cccgcccgc
61 agcccgcca cccgccgcg cgcgccgcg cgcgccgcg cgcgccgcg cgcgccgcg cgcgccgcg
121 cccggcgcg cccggcgcg cccggcgcg cccggcgcg cccggcgcg cccggcgcg cccggcgcg
181 cgggtggcg cgggtggcg cgggtggcg cgggtggcg cgggtggcg cgggtggcg cgggtggcg
241 ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg
301 ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg ccgcccgcg
361 ccgtccacac ccgtccacac ccgtccacac ccgtccacac ccgtccacac ccgtccacac ccgtccacac
421 gtgggacccg gtgggacccg gtgggacccg gtgggacccg gtgggacccg gtgggacccg gtgggacccg
491 gagggggctt gagggggctt gagggggctt gagggggctt gagggggctt gagggggctt gagggggctt
541 tctcccggtg tctcccggtg tctcccggtg tctcccggtg tctcccggtg tctcccggtg tctcccggtg
601 tctgtcaac tctgtcaac tctgtcaac tctgtcaac tctgtcaac tctgtcaac tctgtcaac
661 acgtctgtga acgtctgtga acgtctgtga acgtctgtga acgtctgtga acgtctgtga acgtctgtga
721 tcgttggagc tcgttggagc tcgttggagc tcgttggagc tcgttggagc tcgttggagc tcgttggagc
781 acattgctag acattgctag acattgctag acattgctag acattgctag acattgctag acattgctag
841 gtggagctgc gtggagctgc gtggagctgc gtggagctgc gtggagctgc gtggagctgc gtggagctgc
901 gcgctgcctc gcgctgcctc gcgctgcctc gcgctgcctc gcgctgcctc gcgctgcctc gcgctgcctc
961 tctcactgc tctcactgc tctcactgc tctcactgc tctcactgc tctcactgc tctcactgc

FIG. 4B-1

1021 gcgctcaagc agaagcagca gatccagagg cagatcctca tcgccgagtt ccagaggcag
 1081 cacgagcagc tctccgggca gcacgaggcg cagctccacg agcacatcaa gcaataacag
 1141 gagatgctgg ccatgaagca ccagcaggag ctgctggaac accagcggaa gctggagagg
 1201 caccgccagg agcaggagct ggagaaagcag caccgggagc agaagctgca gcagctcaag
 1261 aacaaggaga agggcaaaaga gagtgcctg gccagcacag aagtgaagat gaagttacaa
 1321 gaatttgtcc agagaccctc gctactggtg gaggcgctg gccacaggga atctgaacca ctgcaactcc
 1381 agagaccctc cccagagcg gactgtcgac cgggaaaacg cagcacagtt ccctgacca gagtctcca
 1441 cccagagcg gatgacttcc gatgacttcc aacagcttct cccctgttac tgggaatgta cgacgccaaa
 1501 gatgacttcc gatgacttcc aacagcttct cccctgttac gaaatcacg gtccaggcta
 1561 aagcagaaag tggccgaaag acggagcagc cccctgttac gcaggaaaga cgggccagtg
 1621 gtactgtctc taaataaagc tccgttgat gtacagact cgcgtggcag cagcggccca
 1681 ggtccggac cagctcacc caacaacagc tccgggagcg tcgctggag gaacgggtatc
 1741 ggcgccgccc tcccagcat cccggcggag acgagtctgg cgcacagact tgtggcacga
 1801 gaaggctcgg ccgctccact tccctctac acatcgccat ccttgcccaa catcacgctg
 1861 ggcctgcctg ccacggccc ctctgcggcg acggcgagcc agcaggacac cgagagactc
 1921 acccttcccg ccctccagca gaggctctcc ctctcccgg cactccctac cactccctac
 1981 ctgagcacct cgcccttgga gcgggacgga gcggcagcg gcggcagcct tctgcagcac
 2041 atggtcttac tggagcagcc accggcaca gcacctctg tcacaggcct gggagtactg
 2101 ccctccacg cacagtccct ggttggtgca gaccgggtgt cccctccat ccacaagctg
 2161 cggcagcacc gccactggg gccgacccag tcggccccgc tggccccaga cggccaggct
 2221 ctgacgacc tggatcatca gcagcagcat cagcagtttc tggagaaaca caagcagcag
 2281 tccagcagc agcaactgca gatgaacaag atcatccca agccaagcga gccagcccg
 2341 cagccggaga gccaccgga ggagacggag gaggagctcc gtgagcaca ggctctgctg
 2401 gacgagccct acctggaccg gctgcggggg cagaaggagg cgacgcaca ggcggcgtg
 2461 caggtgaagc aggagcccat tgagagcgat tgagaaaggg cagagcccc cgggaggtg
 2521 gagccgggccc agcggcagcc cagtgagcag gactgtctc ttagacaga agcctcctg
 2581 ctggagcagc agcgatcca ccagctgagg aactaccagg cgtccatgga ggcggccggc
 2641 atccccgtgt ccttcggcgg ccacaggcct ctgtccccgg cgcagtccct acccggtct
 2701 gccaccttcc ccgtgtccgt gcaggagccc cccaccaagc cgaggttcac gacaggcctc
 2761 gtgtatgaca cgctgatgct gaagcacccag tgcacctgcg ggagtagcag cagccacccc
 2821 gagcacgccg ggagatcca gagcatctgg tccgcctgc agaagacggg cctccggggc

FIG. 4B-2

2881 aaatgcgagt gcatccgcgg acgcaaggcc accctggaag agctacagac ggtgcactcg
 2941 gaagcccaca ccctcctgta tggcacgaac ccctcaacc ggcagaaact ggacagtaag
 3001 aaacttctag gctcgcctcg ctcgcgtgtc tccggctcc cttgcggtgg tgttggggtg
 3061 gacagtgaca ccatatggaa cgaggtgcac tggcggggcagccgcct ggctgtgggc
 3121 tgcgtggtag agctggctct caaggtggcc acaggggagc tgaaaaatgg ctttgctgtg
 3181 gtccgcccc gtgacacca ctggagggag agcacgcca tgggcttttg ctacttcaac
 3241 tccgcggccg tggcagccaa gcttctgcag gctgtgagca gctgtgagca gatcctcacc
 3301 gtggactggg acgtgcacca tggaaaacggg accagcagg ctttctacag cgaccctagc
 3361 gtccgtgata tgtccctcca cgcctacgac gatgggaact tcttcccagg cagcggggct
 3421 cctgatgagg tgggcacagg gcccggcgtg ggtttcaacg tcaacacggc ttccaccggc
 3481 ggcctggacc ccccatggg agacgctgag tacttggcg ccttcagaaac ggtggtaatg
 3541 ccgatcgcca gcgagtttgc ccggatgtg gtgctgggtt catcagggtt cgatgccgtg
 3601 gagggccacc ccaccctct tgggggctac aacctctcg ccagatgctt cgggtacctg
 3661 acgaagcagc tgatgggctt ggctggcggc cgatttgtcc tggccctcga gggagggccac
 3721 gacctgaccg ccatttgcca cgcctcggaa gcatgtgttt ctgccttgct gggaacgag
 3781 cttgatcctc tccagaaaa ggttttacag tactggcgct gcctgcagcg cacaacctcc
 3841 atggagaaag tcatggagat ccacagcaag actgcgaga acgaagaagc cgagacggtc
 3901 acagcggggc gtctctgat gtaggctcag aagcccgccg aaaagagacc agatgaggag
 3961 accgccatgg cctcgcgtgc cgtggacgtg tccctcgaa ctgctgttct cttgtctgtc
 4021 cccatggaa tgaagctca gccaaagaac ttcccggtg cagcctgctg tcccaccgtg
 4081 tgtctctgtc gggctctctt ggagcaccca gagacgcaca tgcacgcctg gccacgggaa gctttctgc
 4141 gggctctctt cagcagggcc cagaggtctc agacgccggc gacgcgcaga cctcacaggg
 4201 cggccaggcc aacacgggac cgcaagggac gccgtggaa agaggaacct agcacactc
 4261 aacacgggac tggcgggtcc agttgacacg aggcacagaa aacaaatctc aaatacaaaa
 4321 tggcgggtcc tggcggatcc taaaactgg tctaaagt tttaccac aactcctgta
 4441 caaacttgat aaccactcga ctcatctgt agcttatttt ttttttaaa aggcgtttt
 4501 aaccactcga gggccgcctc tgtgaaccat agcgggtgtg ggcggggggc ctacggctgt
 4561 gggccgcctc gagggacctt taaagaaaac aaaactggac agaaacagg atgtgagctg
 4621 gagggacctt cttgagtttc tcaaaagcca tcggaagatg cgagtttgtg cctttttttt
 4681 cttgagtttc

FIG. 4B-3

4741 gtggattttt gtgctgggt tttctgaagt ctgaggaaca atgccttaag aaaaaacaaa
4801 cagcaggaat cgtgggaca gtttcctgtg gccagccgag cctggcagtg ctggcacccg
4861 gagctggcct gacgcctcaa cctgttttg gacggggcac gacccgtcat ctccggggcc aggggctgca
4921 gcccgccggt cctgttttg ctttatgtg gacggggcac gacccgtcat ctccggggcc aggggctgca
4981 agtggcaaat cctgttttg ctttatgtg gacggggcac gacccgtcat ctccggggcc aggggctgca
5041 ctcacacgtc acatacgatt acatacgatt taaataaata taaataaata taaataaata taaataaata
5101 ttgcagtggt acgacggtt acgacggtt taaataaata taaataaata taaataaata taaataaata
5161 attttaggta attttaggta attttaggta attttaggta attttaggta attttaggta attttaggta
5221 gaaacttact gaaacttact gaaacttact gaaacttact gaaacttact gaaacttact gaaacttact
5281 gtatatatat gtatatatat gtatatatat gtatatatat gtatatatat gtatatatat gtatatatat
5341 tgaatttgct tgaatttgct tgaatttgct tgaatttgct tgaatttgct tgaatttgct tgaatttgct
5401 tcaagctcca tcaagctcca tcaagctcca tcaagctcca tcaagctcca tcaagctcca tcaagctcca
5461 tacaagtttg tacaagtttg tacaagtttg tacaagtttg tacaagtttg tacaagtttg tacaagtttg
5521 tcatgcacat tcatgcacat tcatgcacat tcatgcacat tcatgcacat tcatgcacat tcatgcacat
5561 ttgtatgaat ttgtatgaat ttgtatgaat ttgtatgaat ttgtatgaat ttgtatgaat ttgtatgaat
5641 ttcttcacca ttcttcacca ttcttcacca ttcttcacca ttcttcacca ttcttcacca ttcttcacca
5701 attcttgctt attcttgctt attcttgctt attcttgctt attcttgctt attcttgctt attcttgctt
5761 tttgtacgat tttgtacgat tttgtacgat tttgtacgat tttgtacgat tttgtacgat tttgtacgat
5821 agtgagagga agtgagagga agtgagagga agtgagagga agtgagagga agtgagagga agtgagagga
5881 ctgtcctagg ctgtcctagg ctgtcctagg ctgtcctagg ctgtcctagg ctgtcctagg ctgtcctagg
5941 attacgaggg attacgaggg attacgaggg attacgaggg attacgaggg attacgaggg attacgaggg
6001 gcccgcccac gcccgcccac gcccgcccac gcccgcccac gcccgcccac gcccgcccac gcccgcccac
6061 gtttaaaact gtttaaaact gtttaaaact gtttaaaact gtttaaaact gtttaaaact gtttaaaact
6121 ttttgagcat ttttgagcat ttttgagcat ttttgagcat ttttgagcat ttttgagcat ttttgagcat
6181 cactgcagc cactgcagc cactgcagc cactgcagc cactgcagc cactgcagc cactgcagc
6241 acccttgctg acccttgctg acccttgctg acccttgctg acccttgctg acccttgctg acccttgctg
6301 ttactctttt ttactctttt ttactctttt ttactctttt ttactctttt ttactctttt ttactctttt
6361 agcacatgaa agcacatgaa agcacatgaa agcacatgaa agcacatgaa agcacatgaa agcacatgaa
6421 agttcagaca agttcagaca agttcagaca agttcagaca agttcagaca agttcagaca agttcagaca
6481 tacagggtag tacagggtag tacagggtag tacagggtag tacagggtag tacagggtag tacagggtag
6541 tcaacttggt tcaacttggt tcaacttggt tcaacttggt tcaacttggt tcaacttggt tcaacttggt

FIG. 4B-4

aagaaaag (SEQ ID NO:8)

LRQGGTLTGKFMSTSSIPGCLLGVALEGDGSPGHASLLQHVL
 LEQARQQSTLIAVPLHGQSPVLTGERVATSMRTVGKLPKRHRPLSRTQSSPLPQSPQAL
 QQLVMQQQHQQFLEKQKQQQLQLGKILTKTGELPRQPTTHPEETEELTEQQEVLLGE
 GALTMPREGSTESESTQEDLEEEDEEEEDGEEEDCIQVKDEEGESGAEEGPDLEEPGA
 GYKKLFSDAQPLQLQVYQAPLSLATVPHQALGRTOSSPAAPGGMKSPDDQPVKHLFT
 TGVVYDTFMLKHQCMCGNTHVHPEHAGRIQSIWSRLQETGLLSKCERIRGRKATLDEI
 QTVHSEYIHTLLYGTSPLNRQKLDKLLGPI SQKMYAVLPCGGIGVSDTVWNEMHSS
 SAVRMAVGCLLELAFKVAAGELKNGFAIIRPPGHHAAEESTAMGFCFFNSVAITAKLLQ
 QKLNVGKVLIVDWDIHHGNGTQQAFYNDPSVLYISLHRYDNGNFFPGSGAPEEVGGGP
 GVGYNVNVAWTGGVDPPIGDVEYLTAFRTVVMPIAHEFSPDVVTLVSAGFDAVEGHLSP
 LGGYSVTARCFGHLTRQLMTLAGGRVVLALGGHDLTAICDASEACVSALLSVELQPL
 DELVLQQKPNINAVATLEKVIETQSKHWSCVQKFAAGLGRSLREAQAGETEEAETVSA
 MALLSVGAEQAAAAAREHSPRPAEPEMEQEPAL (SEQ ID NO:9)

FIG. 5A

FIG.5B-1
FIG. 5B-2

FIG. 5B

1 ccctgaggca ggtggcag ggtggcag ctgaccggca agttcatgag cacatcctct attcctggct
61 gcctgctggg cgtggcactg gaggcgagc ggagcccca cgggcctct cccctgctgc
121 agcatgtgct gttgctggag gggcccgcc agcagagcac cctcattgct gtgccactcc
181 acgggcagtc cccactagt cccactagt acgggtgaac gtgtggccac cagcatgcgg acggtaggca
241 agctcccgcg gcatcggccc ctgagccgca ctcagtcctc accgctgccc cagagtcccc
301 agggccctgca gcagctggtc atgcaacaac agcaccagca gttcctggag aagcagaagc
361 agcagcagct acagctgggc aagatcctca ccaagacagg ggagctgccc aggcagccca
421 ccaccaccct tgaggagaca gaggaggagc tgacggagca gcaggaggtc ttgctggggg
481 agggagccct gaccatgccc gaggagggct ccacagagag tgagagcaca caggagacc
541 tggaggagga ggacgaggaa gggatgggg agggaggagg ggatgcac caggtaagg
601 acgaggaggg cgagagtggc gctgaggagg gcccgcactt ggaggagcct ggtgctggat
661 acaaaaaact gttctcagat gccagccgcg tgcagccttt gcaggtgtac caggcgcccc
721 tcagccctggc cactgtgccc caccaggccc tgggcccgtac ccagtcctcc cctgctgccc
781 ctgggggcat gaagagcccc ccagaccagc ccgtcaagca cctctcac acaggtgtgg
841 tctacgacac gttcatgcta aagcaccagt gcatgtgcgg gaacacacac gtgcaccctg

FIG. 5B-1

```

901 agcatgctgg ccggtaccag agcatctggt cccggctgca ggagacaggg ctgcttagca
961 agtgcgagcg gatccgaggt cgtaaagcca cgctagatga gatccagaca gtgactcttg
1021 aataccacac cctgctctac cctcaacgg gcagaagcta gacagcaaga gacagcaaga
1081 agttgctcgg cccatcagc cagaagatgt atgctgtgct gccttgctgg ggcattcggg
1141 tggacagtga caccgtgtgg aatgagatgc actcctccag tgctgtgctg atggcagtgg
1201 gctgcctgct ggagctggcc ttcaaggtgg ctgcaggaga gctcaagaat ggatttgcca
1261 tcatccggcc ccaggacac caccggagg aatccacagc caccggattc tgcttcttca
1321 actctgtagc catcacgca aaactcctac agcagaagt gaaactgggc aaggtcctca
1381 tcgtggactg ggacattcac catggcaatg gacccagca ggcgttctat aatgacccct
1441 ctgtgctcta catctctctg catcgctatg acaacgggaa ctcttctcca ggctctgggg
1501 ctctgaaga ggttggtgga ggaccaggcg tggggtacaa tgtgaacgtg gcatggacag
1561 gaggtgtgga ccccccatt ggagacgtgg agtaccttac agccttcagg acagtggtag
1621 tgccatttgc ccacgagttc tcacctgatg tggctcctagt ctccgccggg tttgatgctg
1681 ttgaaggaca tctgtctcct ctgggtggct actctgtcac cgcagatgt tttggccact
1741 tgaccaggca gctgatgacc ctggcagggg gccgggtggt gctggccctg gagggaggcc
1801 atgacttgac cgccatctgt gatgcctctg aggccttgct caacatcaac gcagtggcca
1861 agctgcagcc ctgggatgag gcagtcttgc agcaaaagcc aactgtgag aagttcgccg
1921 cgctagagaa agtcatcgag atccagagca aacactggag cgtgtgtag gccgagactg
1981 ctggtcttgg ccggtccctg cgagaggccc aagcagggtga ggccgaggag gccgagactg
2041 tgagcgccat ggccttgctg tcggtggggg ccgagcaggc ccaggctgag gcagcccggg
2101 aacacagccc caggccggca gaggagccca tggagcagga gcctgccctg tgacgccccg
2161 gccccatcc ctctcggctt caccattgtg atttgttta tttttctat taaaaacaaa
2221 aagtcacaca ttc (SEQ ID NO:10)

```

FIG. 5B-2

1	mtstgqdstt	trqrrsrqnp	qspqqdssvt	skrnikkjav	prsiipnlaev	kkkgkmmkklg
61	gameedlivg	lqgmdlnlea	ealagtglvl	deqlnefhcl	wddsfppegpe	rlhaikaeqli
121	qeglldrcvs	fqarfaekee	lmlvhsleyi	dlmettgymn	egelrvladt	ydsvylhpnps
181	yscaclasgs	vrlrvdavlq	aeirngmai	rppghhaqhs	lmdgycmfnh	vavaaryaqq
241	khrrrrvli	dwdvhhgqgt	qftfdqdpvs	lyfsihryeq	grfwphlka	nwsttgfgqg
301	qgytinvpwn	qvgmrdadyi	aafhlvllpv	alefqpqlvl	vaagfdalqg	dpkgemaatp
361	agfaqlthll	mglaggklil	sleggnira	laegvsaslh	tlldgpcpml	espgapcrsa
421	qasvscalea	lepfewevlvr	stetverdnm	eednveese	egpweppvlp	iltwvplqsr
481	tglvydgnm	nchnlwdshh	pevpqirilri	morleelgia	grcltittprp	ateaelltch
541	saeyvghlra	tekntkrelh	ressnfdsiy	icpstfacaq	Iatgaacrly	eavisgevin
601	gaavvrppgh	haeqdaacgf	cffnsvavaa	rhaqtisgha	lrilivdwdv	hhngntqhmff
661	eddpvlyvs	lhrydhgtff	pmgdegassq	igraagtgt	vnnvawngprm	gdadylaawh
721	rlvlpiaeyf	npelvlvsag	fdaargdplg	gcqvspegya	hlthllmgl	sgriillileg
781	gynltsises	maactrsilg	dppplltlpr	pplsgalasi	tetiqvhhry	wrslrvmkve
841	dregpssskl	vtkkapqpak	prlaermtrr	ekkvleagmg	kvtasafgee	stpgqtnset
901	avvalcqddp	seaatggatl	aqtiseaaig	gamlgqttse	eavggatpdpq	ttseetvgsa
961	ildqttseda	vvgatigqgt	seeavggatl	aqtiseaame	gatldqttse	eapggteliiq
1021	tplasstdhq	tpptspvqgt	tpqispstli	gsrlrtlelgs	esqgasesqa	pgeenllgea
1081	aggqdmadm	lmqgsrgltd	qaifyavtpl	pwcphlvavc	pipaagldvt	qpcgdcgtiq
1141	enwvclscyq	vycgryingh	mlqhhgnsgh	plvlsvydl	awcyycqayv	hhqalldvkn
1201	iahqnkfged	mphph	(SEQ ID:11)			

FIG. 6A

FIG. 6B-1
FIG. 6B-2
FIG. 6B-3

FIG. 6B

1 gggcaggtccc ctgaggagcg gggctggttg aaacgctagg ggcgggatct ggcggagtgg
61 aagaaccgcg gcaggggcca agcctcctca actatgacct caaccggcca ggattccacc
121 acaaccaggc agcgaagaag taggcagaac cccagtcgc cccctcagga ctccagtgtc
181 actcgaagc gaaatatataa aaaggagcc gtccccgct ctatcccaa tctagcggag
241 gtaagaaga agggcaaaat gaagaagctc ggccaagcaa tggagaaga cctaatacgtg
301 ggactgcaag ggatggatct gaacctcgag gctgaagcac tggctgggtg
361 ttggatgagc agttaaatga attccattgc ctctgggatg acagcttccc ggaaggccct
421 gagcggctcc atgccatcaa ggagcaactg atccaggagg gcctcctaga tcgctgcgtg
481 tcctttcagg cccggtttgc tgaaaaggaa gagctgatgt tggttcacag cctagaatat

FIG. 6B-1

541 attgacctga tggaaacaac ccagtacatg aatgaggag aactccgtgt cctagcagac
601 acccagact cagtttatct gcatacgaac tcatactcct gtgcctgcct ggcctcaggc
661 tctgtcctca ggctgtgga tgcggtcctg ggggctgaga tccggaacgg catggccatc
721 attagggcctc ctggacatca cggccagcac agtcttatgg atggctattg catgttcaac
781 cacgtggctg tggcagccc ctagctcaa cagaacacac gcacccggag ggtccttatac
841 gtagattggg atgtgcacca cggtaagga acacagttca cctcgacca ggacccagt
901 gtccctctatt tctccatcca ccgtacgag cagggtaggt tctggcccca cctgaaggcc
961 tctaaactggt ccaccacagg ttctggccaa ggccaaggat ataccatcaa tgtgccttgg
1021 aaccaggctg ggatgcggga tgctgactac attgctgctt tcctgcacgt cctgctgcca
1081 gtcgccctcg agctccagcc tcagctggtc ctggtggccg ctggatttga tggcctgcaa
1141 ggggacccca agggcgagat ggccgcaact ccggcagggt tcgccagct aaccacctg
1201 ctcatgggtc tggcaggagg caagctgac ctgtctctgg agggtggcta caacctccg
1261 gccctggctg aaggcgtcag tgcttcgctc cacaccttc tgggagaccc ttgccccatg
1321 ccggagtcac ctggtgcccc ctgccggagc gccaggctt cagtttcctg tgctctgga
1381 gccctgagc cctctggga ggtctctgtg agatcaactg agaccgtgga gagggacaac
1441 atggaggagg acaatgtaga ggagagcgag gaggaaaggac cctgggagcc cctgtgtctc
1501 ccaatccctga calggccagt gctacagtct cgcacaggcc tggctctatga ccaaaatatg
1561 atgaataact gcaacttgtg ggacagccac caccctgagg taccacagcg catcttgccg
1621 atcatgtgcc gtctggagga gctgggccct gccgggcgct gcctcacctt gacaccggc
1681 cctgccacag aggctgagct gctcacctgt cacagtgtg cactacgtgg agtacctccg
1741 gccacagaga aatgaaaac ccgggagctg caccgtgaga gtccaactt tgactccatc
1801 tatatctgcc ccagtaacct cgcctgtgca cagcttgcca ctggcgctgc ctgccgcctg
1861 gtggaggctg tgctctcagg agaggtcctg aatggtgctg ttttgctttt tccccagga
1921 caccacgcag agcaggatgc agcttgccgtt ttttgctttt tcaactctgt ggctgtggct
1981 gctcggccatg ccagactat cagtgggcat gccctacgga tcctgattgt ggattgggat
2041 gtccaccacg gtaatggaac tcagcacatg tttgaggatg acccagtggt gctatatgtg
2101 tccctgcacc gctatgatca tggcaccttc tccccatgg gggatgaggg tggcagcagc
2161 cagatcggcc gggccgcggg cacaggcttc accgtcaacg tggcatgga tgggccccgc
2221 atgggtgatg ctgactacct agctgcctgg catcgctgg tgcttcccat tgcctacgag
2281 ttaaacccag aactggtgct ggtctcagct ggctttgatg ctgcacgggg ggtccgctg

FIG. 6B-2

2341 gggggctgcc aggtgtcacc tgagggttat gccacctca ccacctgct gatggcctt
 2401 gccagtggcc gcattatcct tatcctagag ggtggctata acctgacatc catctcagag
 2461 tccatggctg cctgcactcg cctcctcctt ggagaccac caccCtgct gacctgccca
 2521 cggccccac tatcagggc cctggcctca atcactgaga ccatccaagt ccatcgcaga
 2581 tactggcgca gctacgggt catgaaggca gaagacagag agggaccctc cagttctaag
 2641 ttggtcacca agaaggcacc ccaaccagcc aaacctaggt tagctgagcg gatgaccaca
 2701 cgagaaaaa aggttctgga agcagggcatg gggaagtca cctcggcatc atttggggaa
 2761 ggtccactc caggccagac taactcagag acagtgtgg tggccctcac tcaggaccag
 2821 cctcagagg cagccacagg gggagccact ctggcccaga ccatttctga ggcagccatt
 2881 gggggagcca tgctgggcca gaccacctca gaggaggctg tcggggggagc cactccggac
 2941 cagaccact cagaggagac tgtggggagg gccattctgg accagaccac ctcagaggat
 3001 gctgttggg gagccacgct gggccagact acctcagagg aggtgttagg aggagctaca
 3061 ctggcccaga ccattctgga ggcagccatg gaggagcca cactggacca gactacgtca
 3121 gaggaggctc cagggggcac cgagctgac cgaactcctc tagcctcgag cacagaccac
 3181 cagaccccc caacctcac ttgtcaggga actacacccc agatatctcc cagtacactg
 3241 attgggagt tcaggacctt ggagctaggc agcgaacctC agggggcctc agaactctag
 3301 gcccaggag aggagaacct accaggagag gcagctggag gtcaggacat ggctgattcg
 3361 atgctgacg agggatctag gggcctcact gatcaggcca tattttatgc tgtgacacca
 3421 ctgcccctggt gtcccattc ggtggcagta tgcccatac ctgcagcagg cttagacgtg
 3481 acccaacctt gtggggactg tggaacaatc caagagaact caagactggc ggtgtgtgtct ctcttgctat
 3541 caggtctacc gtggtcgtta catcaatggc cactgctcc cagacatgg aaatctgga
 3601 caccgctgg tcctcagcca catcgacctg tcagcctggc gttactactg tcaggcctat
 3661 gtccaccacc aggtctctct agatgtgaag aacatcgccc accagaacaa gtttggggag
 3721 gatatgcccc acccacata agcccagaa tacggtccct ctacacctc tgaggccac
 3781 gatagaccag ttccagcctg ttccaggctg taccttggat gaggggtagc ctccactgc
 3841 atcccactct gaatatcctt tgcaactccc caagagtgtt tatttaagtg ttaatacttt
 3901 taagagaact gcgacgatta attgtggatc tccccctgcc catcgcccg catcaggggca
 3961 cactactcc agcccagaag gaaagggggg cagctcagtg gcccraagag ggagccgata
 4021 tcatgaggat aacattggcg ggaggggagt taactggcag gcattggcaag gttgcatatg
 4081 taataaagta caagctgtt (SEQ ID NO: 12)

FIG. 6B-3

```

1  mdlrvgqrpp      vepppeptll  alqrpqrlhh  hlflaglqqq  rsvepmrlsm  dtpmpelqvg
61  pgeqelrqll      hkdkskrsav  assvvkqkla  evilkkqaa  lertvhnsp  gipyrtlepi
121 etegatrsm1      ssflppvpsi  psdppehfp1  rktvsepnk  lrykpksle  rrknpllrke
181 sappslrrrp      aetlgdssps  ssstpascgs  spndsehgn  pilgdsdrrt  hptlgprgpi
241 lgsphtplf1      phglepeagg  clpsrlqp1l  lldpsgshap  lltvpglgpl  pfhfaqsimt
301 terlsgsgh      wplsrtsep  lppsatappp  pgpmqprleq  lkthvqvkr  sakpsekprl
361 rqipsaedle      tdgggpggv  ddglehrelg  hgqpearpa  plqqhvpvii  weqqrlagr1
421 prgstgdcvi      lplaqgghrp  lsraqsspa  pasisapapa  sqarvlsse  tpartlpflt
481 gliydsvmk      hqscgdnr   hpehagriqs  iwsrlqergl  rsqceclgr  kasieelqsv
541 hserhvllyg      tnplsrlkl  ngklagiiag  rmfemlpcgg  vgvdtdtiwn  elhssnaarw
601 aagsvtdlaf      kvasrelkng  favvrppghh  adhstamgfc  ffnsvaiacr  qlqqqskask
661 askilivdwd      vhhngtqqt  fyqdpvlyi   slhrhddgnf  fpgsgavdev  gagsgegfnv
721 nvawaggldp      pmgdpeylaa  frivvmpiar  efspdlvls  agfdaaeghp  aplggyhvsa
781 kcfgymtqq1      mnlaggav1  alegghd1ta  icdaseacva  allgnrvdp1  seegwkqkpq
841 pqchplsgr      dpgaq (SEQ ID NO:13)

```

FIG. 7A

1 ataataccta ccttgcagga ccacgacagg attaagtgag gaaaaacccc catgagagtg
61 tttttgccatt gtcaagttag cctgagggag gctgaggggg gatcaggctg tatcatgccc
121 ccgaggacaa actttccagt ttaccctgct cctctctctt gtccttaggc tgccccaggc
181 cctgcgcaga cacaccaggc cctcagccgc agcccatgga cctgcgggtg ggcacgaggc
241 ccccagtga gccccacca gagccacat tgctggccct gcagcgtccc cagcgcctgc
301 accaccact ttccctagca ggcctgcagc agcagcgtc ggtggagccc atgaggctct
361 ccatggacac gccgacgccc gagttgcagg tgggacccca ggaacaagag ctgcggcagg
421 ttctccaaa ggaacaagc aagcgaagt ggttagccag cagcgtggtc aagcagaagc
481 tagcggaggt gattctgaaa aaacagcagg cggccctaga aagaacagtc catcccaaca
541 gccccggcat tccctacaga acccgggagc cctgggagc ggaaggagcc accgcctcca
601 tgctcagcag ccttcgcct cctgctcca gcccgcctc tgacccccc gagcactccc
661 ctctgcgcaa gacagtctct gagcccaacc tgaagctgcg ccataagccc aagaagtccc
721 cggagcggag gaagaatcca ctgctccgaa aggagagtgc gccccccagc cccggcggc
781 gggccgcaga gacctcggg gactcctccc caagtagtag cagcacgccc gcatcagggc
841 gcagtcccc caatgacagc gagcacggc ccaatccat cctgggcgac agtgaccgca
901 ggaccatcc gactctggg cccgggggc caatcctggg gagcccccac actcccctc
961 tcctgcccc tggcttggg cccgaggctg ggggcacctt gccctcccc ctgcagccca
1021 tcctctcct ggacctca ggcctcatg cccgctgct tgactgtgcc gggcttgggc
1081 ccttgccctt ccactttgcc cagtcttaa agccacctg tgaccaccga ggggtctct
1141 tccactggc actgagccg actcgtcag agccctgccc cccagtgcc accgctccc
1201 caccgccggg cccatgcag cccgcctgg agcagctcaa aactcacgtc caggtgatca
1261 agaggtcagc caagccgagt gagaagccc ggtgctggga gataccctcg gctgaagacc
1321 tggagacaga tggcggggga ccgggccagg tggtagcga cggcccgag cacagggagc

FIG. 7B

FIG. 7B-1

1381 tgggccatgg gcagcccag gccagaggcc ccgctcctct ccagcagcac ctcaggtgtg
 1441 tgctctggga acagcagcga ctggctgggc ggctcccccg gggcagcacc ggggacactg
 1501 tgctgcttcc tctggcccag ggtgggcacc ggctctgtc ccgggtcag tcttcccag
 1561 ccgcaacctg ctcactgtca gcccagagc ctgccagcca ggcccgagtc ctctccagct
 1621 cagagacccc tgccaggacc ctgcccttca ccacagggct gatctatgac tcggtcatgc
 1681 tgaagcacca gtgctcctgc ggtgacaaca gcaggcaccc ggagcacgcc ggccgcaccc
 1741 agagcatctg gtcccggctg caggagcggg ggctcggag ccagtgtgag tgtctccgag
 1801 gccggaaggc ctccctggaa gagctgcagt cggtcactc tgagcggcac gtgctcctct
 1861 acggcaccaa ccgctcagc cgcctcaaac tggacaacgg gaagctggca gggctcctgg
 1921 cacagcggat gtttgagatg ctgccctgtg gtgggacct ggtggacact gacaccatct
 1981 ggaatgagct tcattccLcc aatgcagccc gctgggcgc tggcagtgtc actgacctcg
 2041 ccttcaaagt ggcttctcgt gagctaaaga atggtttcgc tgtggtgcgg ccccaggac
 2101 accatgcaga tcattcaaca gccatgggct tctgcttctt caactcagtg gccatcgctt
 2161 gccggcagct gcaacagcag agcaaggcca gcaaggccag caagatcctc attgtagact
 2221 gggacgtgca ccatggcaac ggcaccagc aaaccttcta ccaagacccc agtgtgctct
 2281 acatctccct gcctcgccat gacgacggca acttcttccc ggggagtggg gctgtggatg
 2341 aggtaggggc tggcagcggc gagggcttca atgtcaatgt ggctggggc ggaggtcttg
 2401 acccccctat gggggatcct gactacctgg ctgctttcag gatagtcgtg acgcccatcg
 2461 ccgagagttt ctctccagac ctagtccctgg tgtctgccgg atttgatgct gctgaggggtc
 2521 acccggtccc acLgggtggc taccatgttt ctgccaaatg ttttggatac atgacgcagc
 2581 aactgatgaa cctggcagga ggcgcagtgg tgctggcctt ggaggggtggc catgacctca
 2641 cagccatctg tgacgcctct gaggcctgtg tggctgctct tctgggtaac aggggtggatc
 2701 ccttttcaga agaaggctgg aaacagaaac ccaacctca atgccactcg ctctctggag
 2761 gccgtgatcc ggtgacacag taaatactgg ggctgcatgc aggccttggc ctctgtcca
 2821 gactcctggg tgcctagagt gccaggggct gacaaagaag aagtggaggc agtgaccgca
 2881 ctggcgctccc tctctgtggg catcctggct gaagataggc cctcggagca gctgggtggag
 2941 gaggaagaac ctatgaatct ctaaggctct ggaacctctt gccgccccac catgcccttg
 3001 ggacctgggt ctcttctaac ccctggcaat agccccctt cctgggtctt tagagatcct
 3061 gtgggcaagt agttggaacc agagaacagc ctgcctgctt tgacagttat ccaggggagc
 3121 gtgagaaaat c (SEQ ID NO:14)

FIG. 7B-2

1 meepeeepads gqslvpvyiy speyvsmcnds lakipkrasm vhsliedayal hkqmrivkpk
61 vasmeematf htdaylqlhlq kvsqegdddh pdsieyglgy dcpategifd yaaaiggati
121 taaqclidgm ckvainwsgg whhakdeas gfcylndavl gilrlrrkfe rilyvdldlh
181 hgdgvedafs ftskvmtvsl hkfspgffpg tgdvsdvglg kgryysvnpv iqdgigdeky
241 yqicesvlke vyqafnpkav vlqlgadtia gdpmcfnmt pvgigkclky ilqwqlatli
301 lggggynlan tarcwtyltg vilgkltlsse ipdbefftay gpdyvleitp scrpdrneph
361 riqqilnyik gnlkhvv (SEQ ID NO:15)

FIG. 8A

1 gaaatcggc acgagctcgt gccgaatcgc gcacgagaac ggtttaagc ggaagatgga
61 ggagccggag gaaccggcgg acagtgggca gtgcctggtc ccggtttata tctatagtcc
121 cgagtatgc agtatgtgtg actccctggc caagatcccc aaacggggca gtatggtgca
181 ttctttgatt gaagcatatg cactgcataa gcaaatgagg atagttaagc ctaagtggc
241 ctccatggag gagatggcca cttccacac tgatgcttat ctgcagcatc tccagaaggt
301 cagccaagag ggcatgatg atcatccgga ctccatagaa tatgggctag gttatgactg
361 ccagccact gaagggatat ttgactatgc agcagctata ggaggggcta cgatcacagc
421 tgcccaatgc ctgattgacg gaatgtgcaa agtagcaatc aactggctctg gaggtggca
481 tcatgcaaa aaagatgaag catctggttt tcgttatctc aatgatgctg tcctgggaat
541 attacgattg cgacggaaat ttgagcgtat tcctacgtg gattcggatc tgcaccatgg
601 agatggtgta gaagacgcat tcagttcac ctccaaagtc atgaccgtgt ccctgcacaa
661 attctcccca ggatttttcc caggaacagg tgacgtgtcc gacgttggcc tagggaagg
721 acggtactac agtgtaaatg tgcccatcca ggatggcata caagatgaaa aatatacca
781 gatctgcgaa agtgtactaa aggaagtata ccaagccttt aatcccaag cagtgtctt
841 acagctggga gccgacacaa tagctgggga tcccatgtgc tcctttaaca tgactccagt
901 gggaattggc aagtgtctca agtacatccc tcaatggcag ttggcaacac tcatttcggg
961 aggaggaggc tataaccttg ccaacacggc tcgatgctgg acatactga ccggggtcat
1021 cctagggaaa aactatcct ctgagatccc agatcatgag ttttccacag catatggtcc
1081 tgatttatgtg ctggaaatca cgccaagctg ccggccagac cgcaatgagc ccaccgaaat
1141 ccaacaaatc ctcaactaca tcaaagggaa tctgaagcat gtggtctagt tgacagaaag
1201 agatcagggtt tccagagctg aggagtgggtg cctataatga agacagcgtg ttatgcaag
1261 cagtttgrgg aatttgtgac tgcagggaaa atttgaaaga aattacttcc tgaaaaattc
1321 caaggggcat caagtggcag ctggcttctt ggggtgaaga ggcaggcacc ccagagtcct
1381 caactggacc taggggaaga aggagatarc ccacatttaa agttcttatt taaaaaaca
1441 cacacacaca aatgaaattt ttaatcttg aaaattattt ttaagcgaat tggggagggg
1501 agtattttaa tcatcttaaa tgaacagat cagaagctgg atgagagcag tcaccagttt
1561 gtagggcagg aggcagctga caggcagggn tngggcctcn ggaccancca ngtggagccc
1621 tgggagagan ggtactgac ngcagactgg gagg (SEQ ID NO:16)

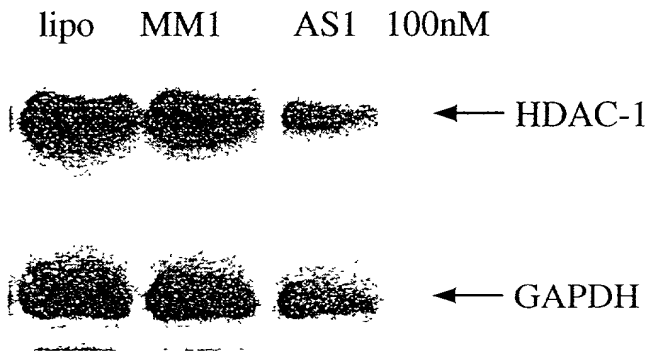


FIG. 9A

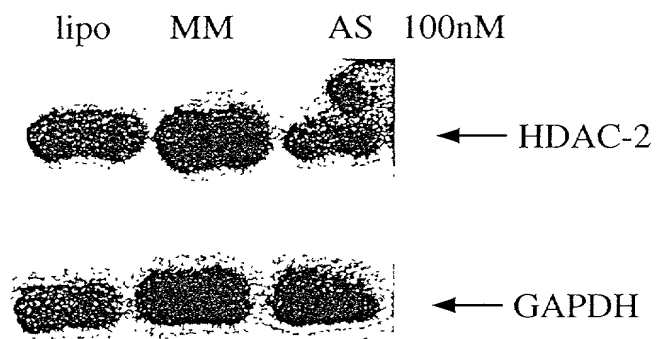


FIG. 9B

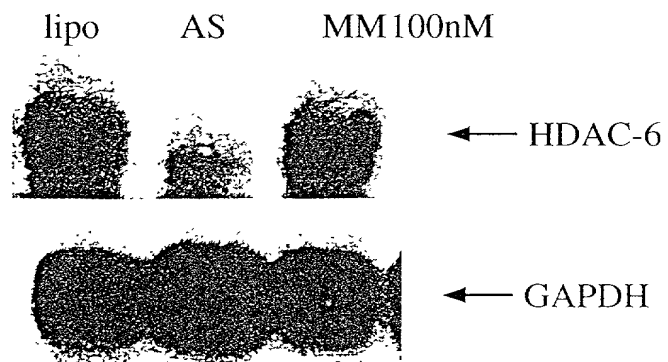


FIG. 9C

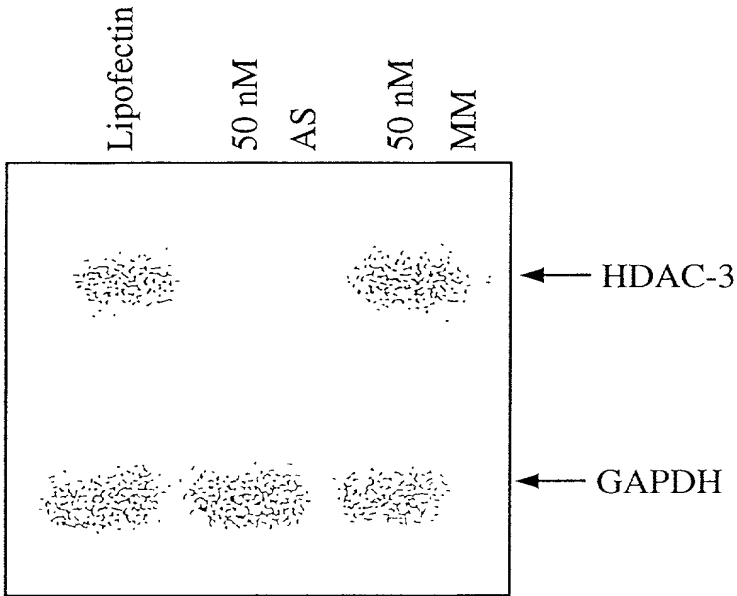


FIG. 9D

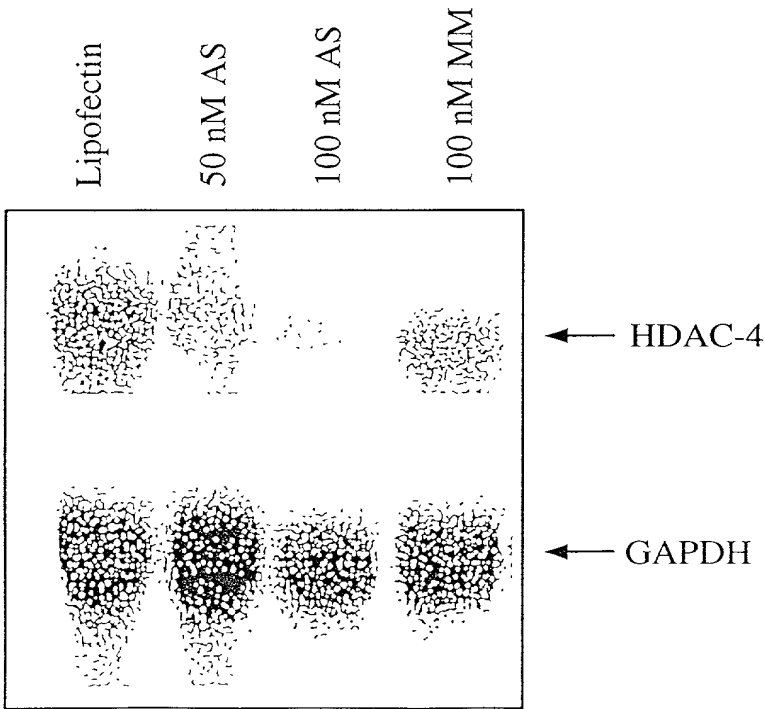


FIG. 9E

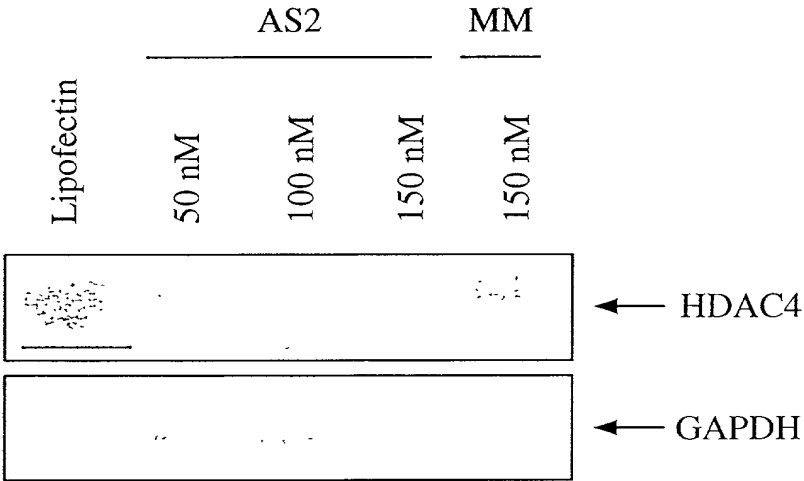


FIG. 9F

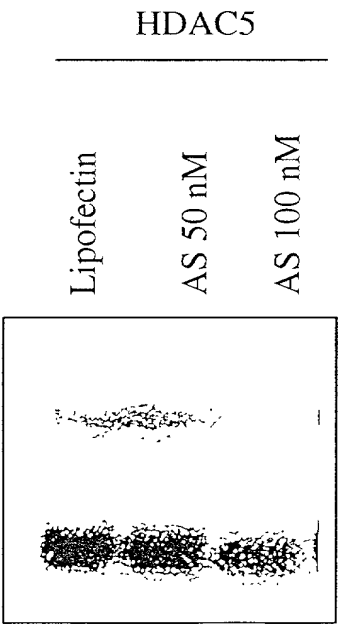


FIG. 9G

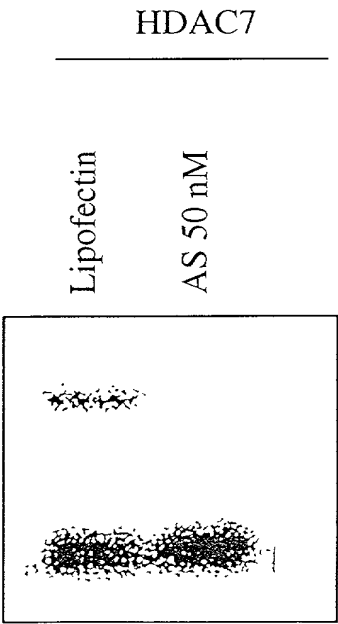


FIG. 9H

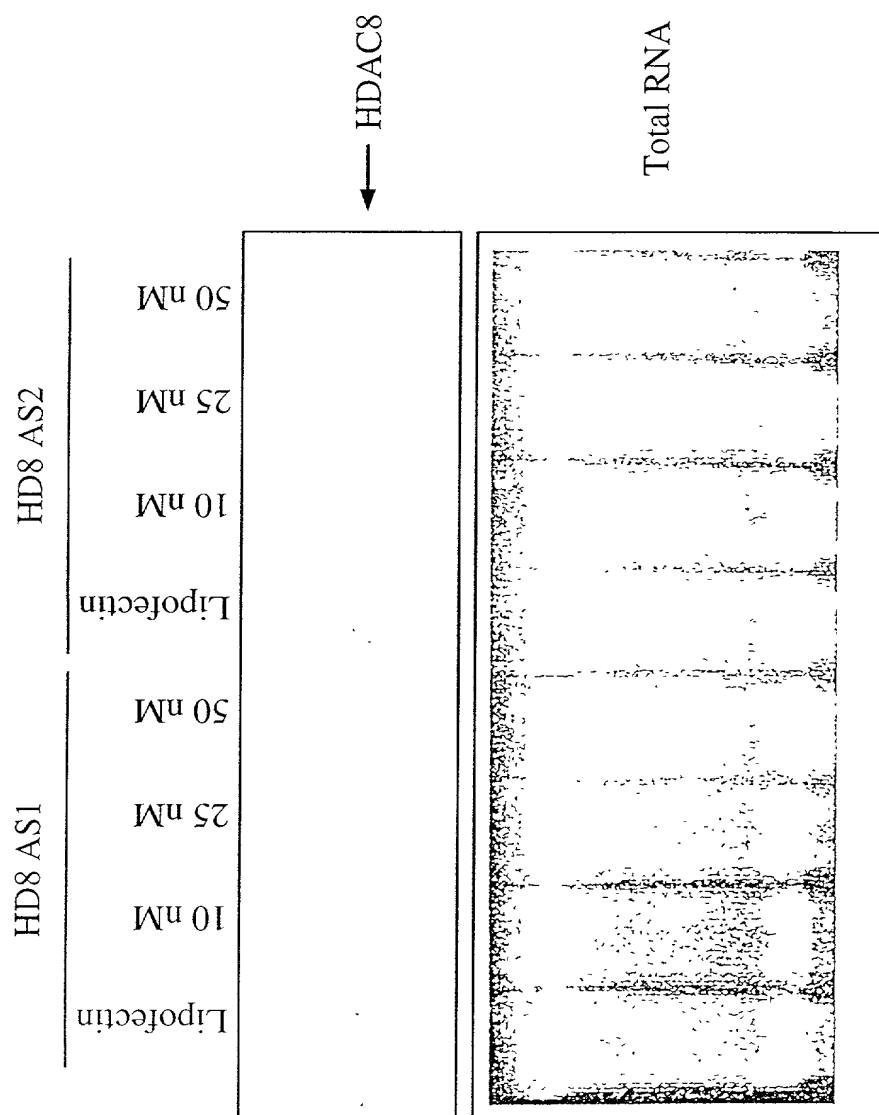
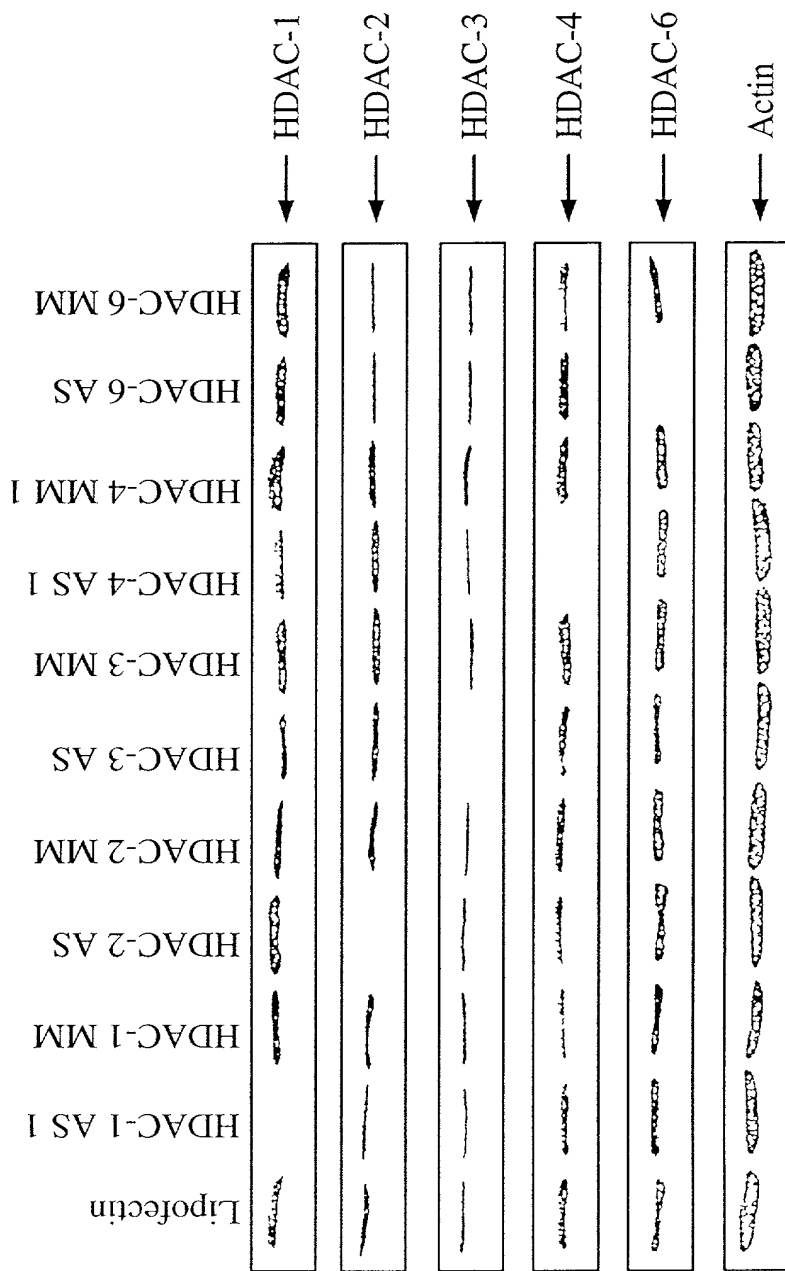


FIG. 9I



AS = Antisense
MM = Mismatch
NS = Non-specific control
3 day treatment
Oligonucleotide cone – 50nM

FIG. 10A

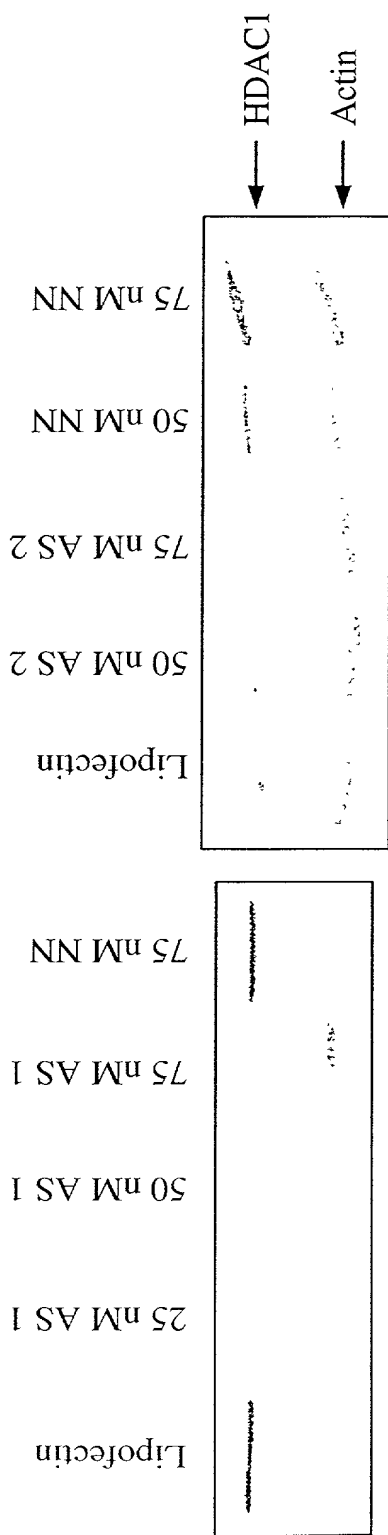


FIG. 10B

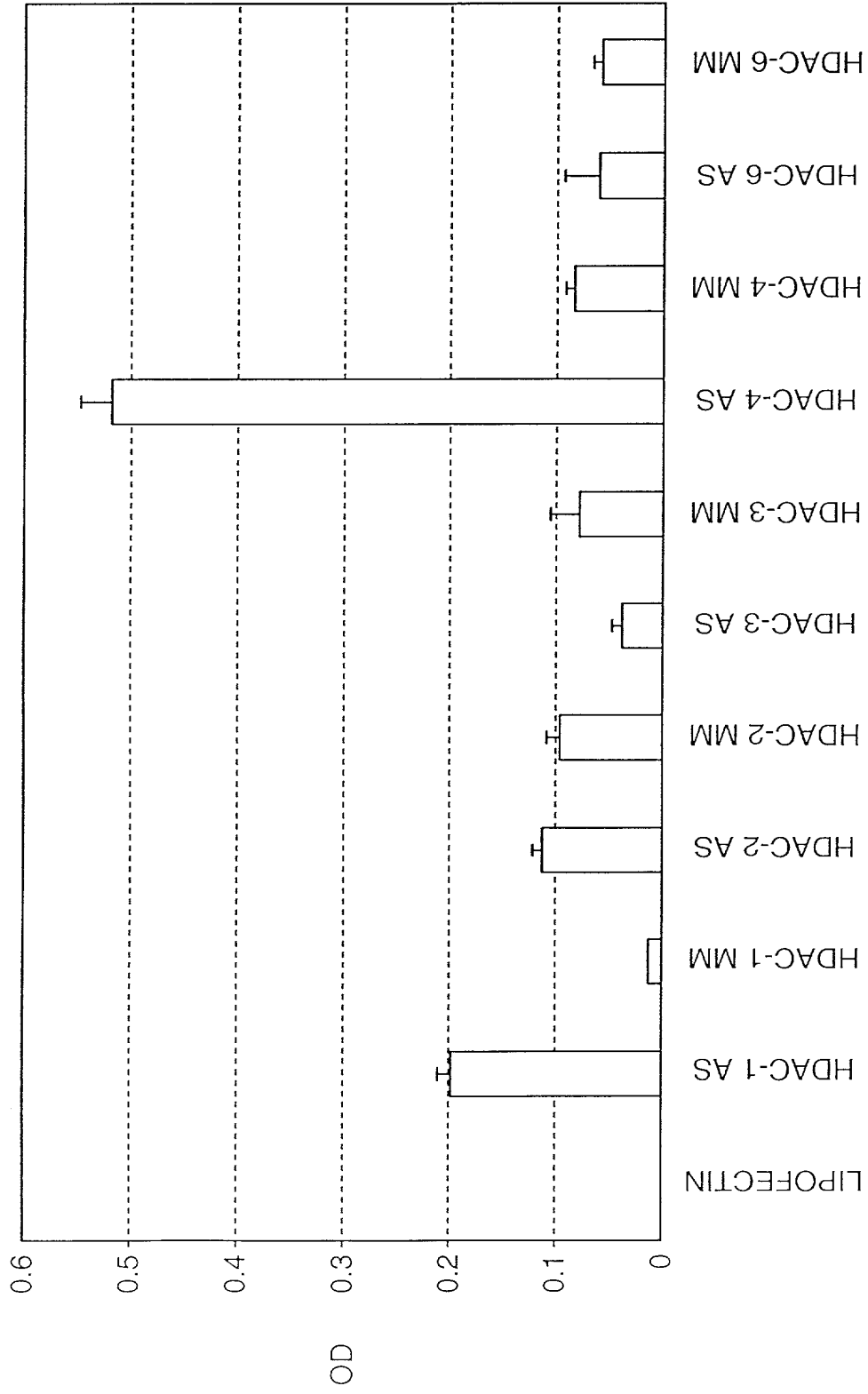


FIG. 11

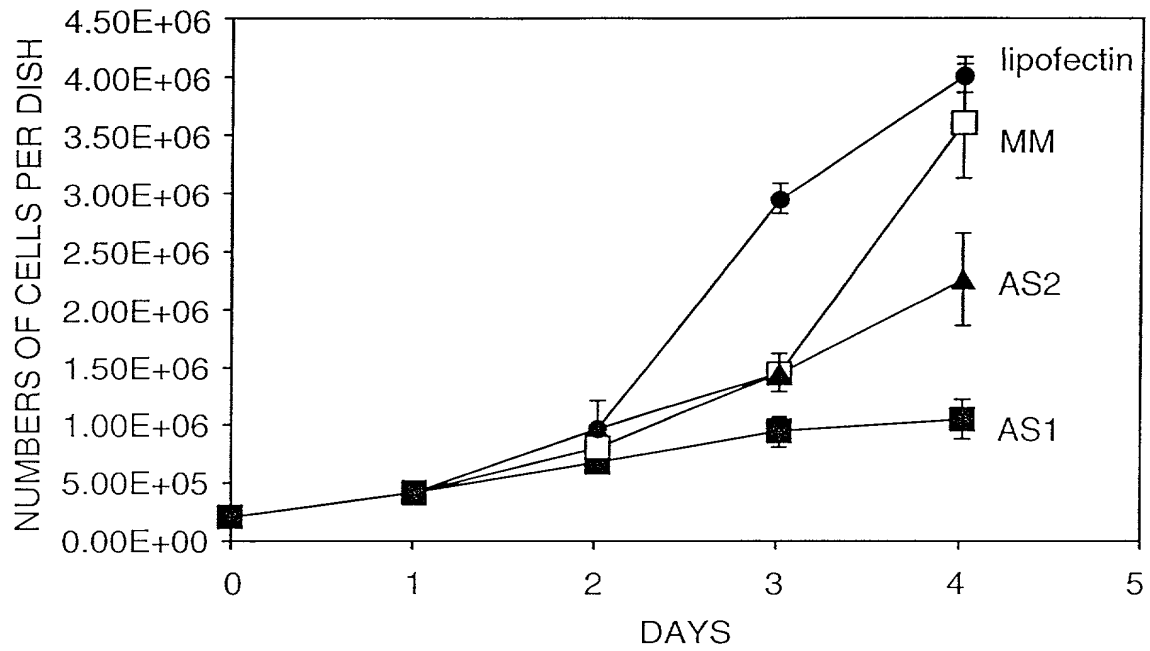


FIG. 12A

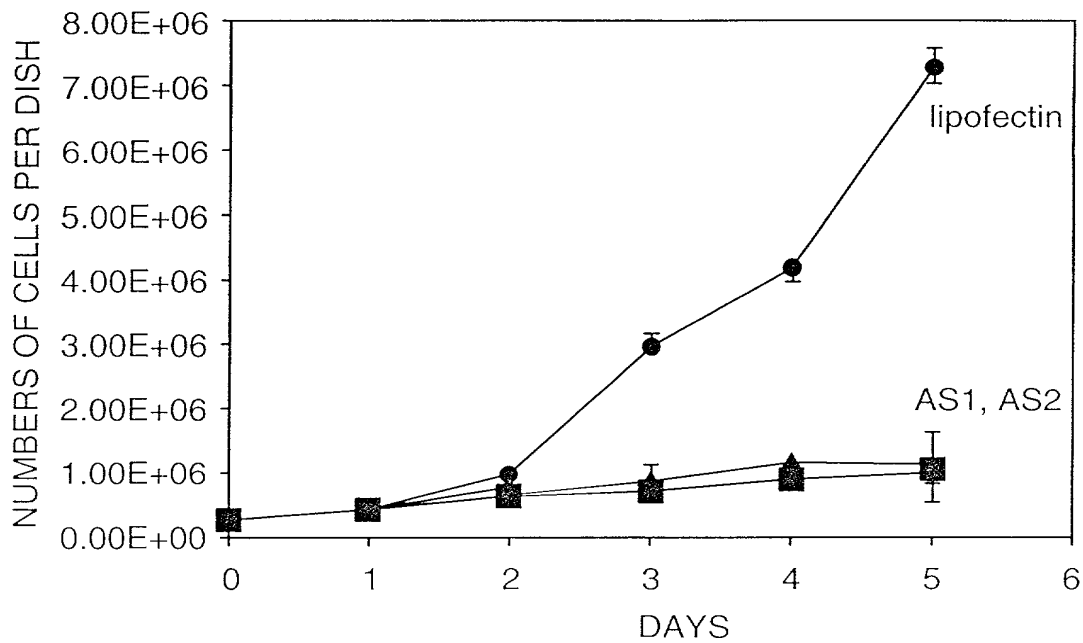


FIG. 12B

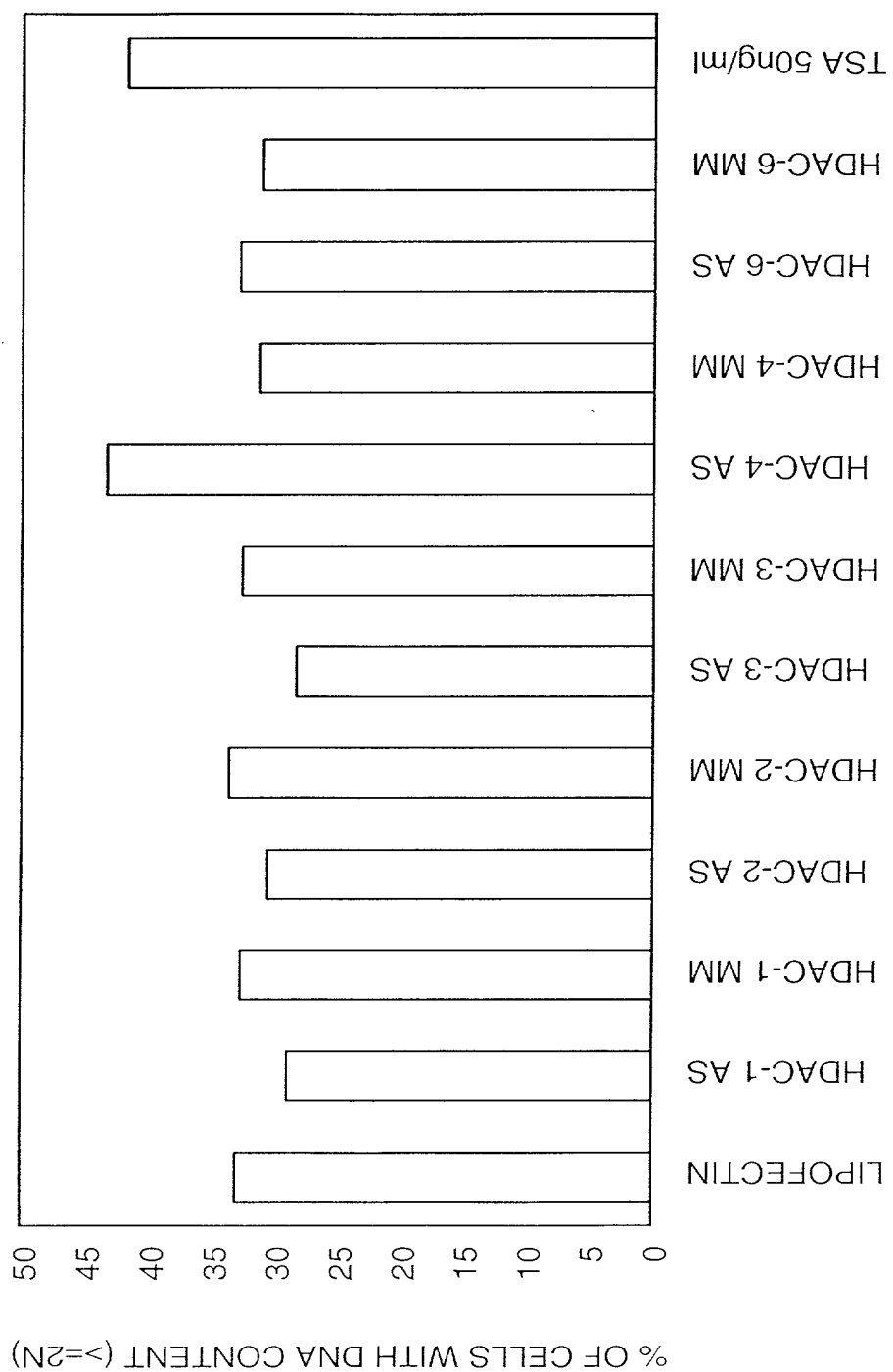


FIG. 13

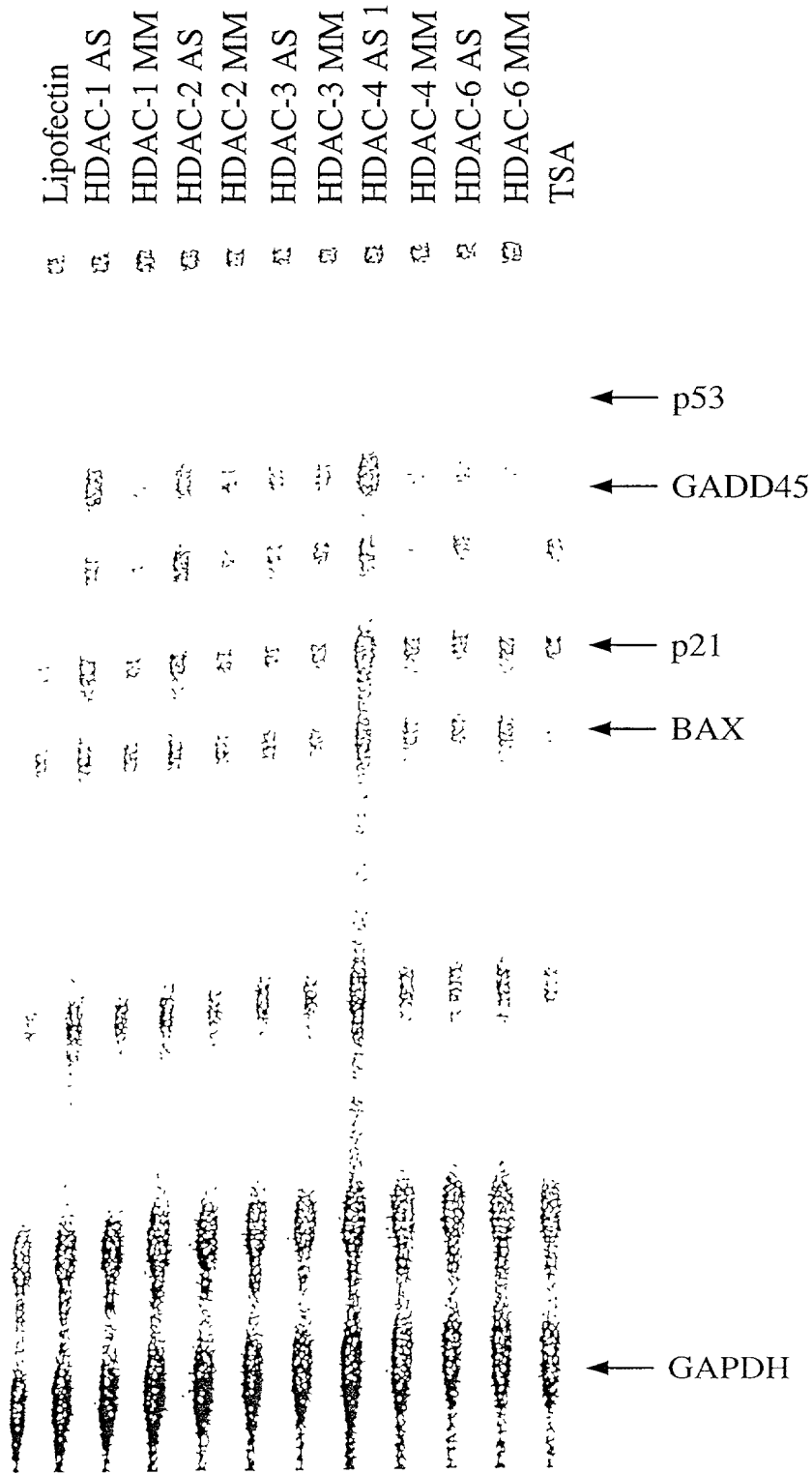


FIG. 14

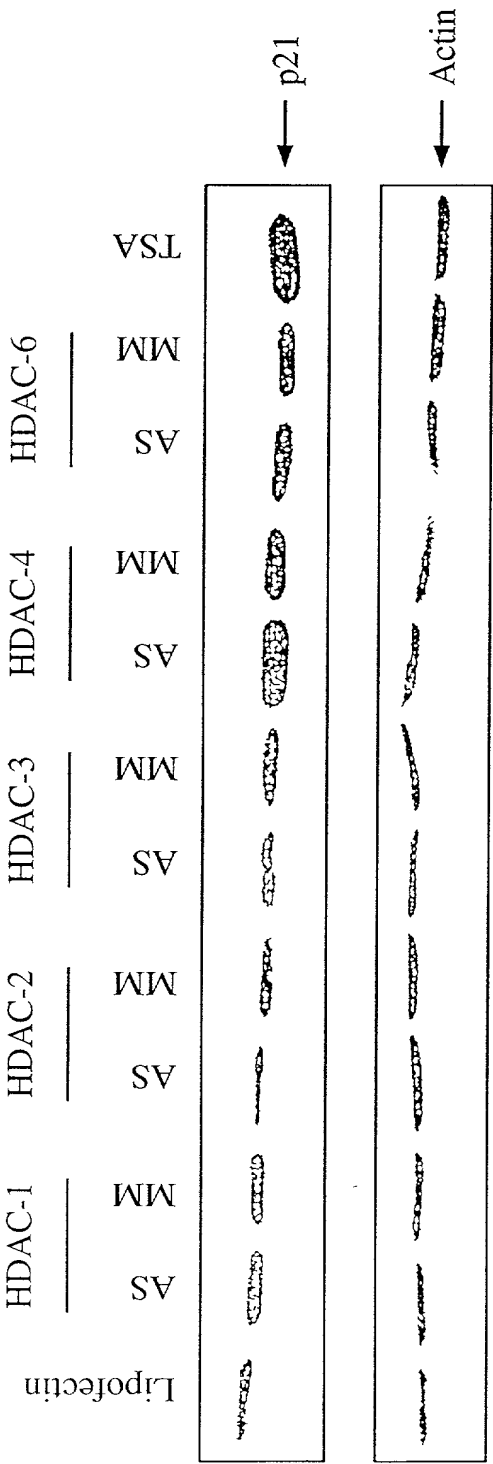


FIG. 15

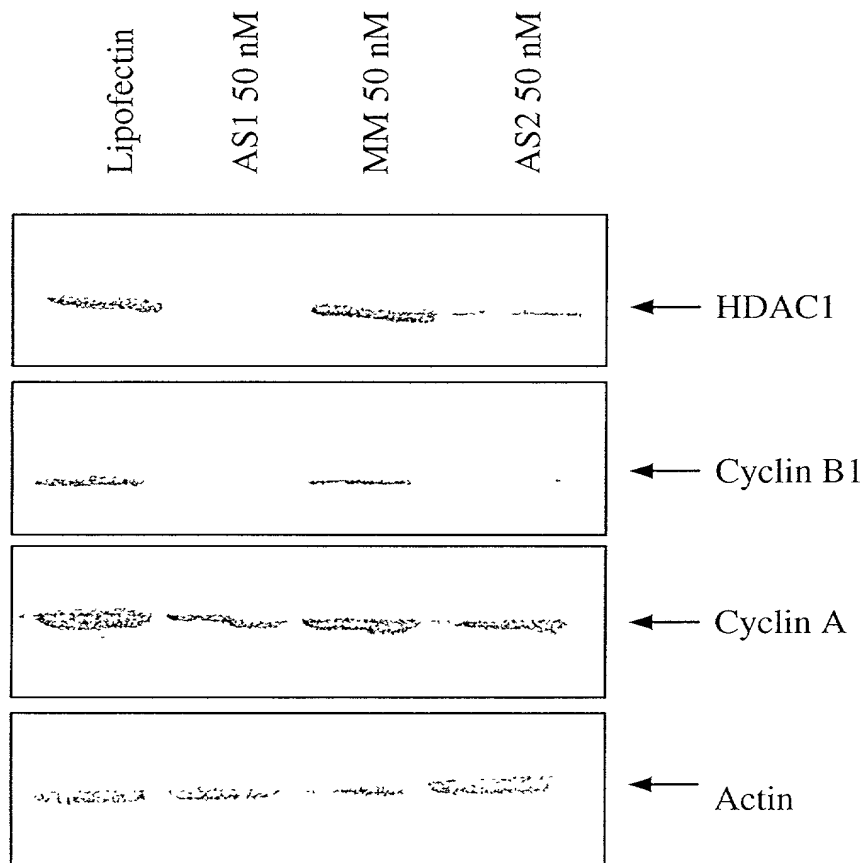


FIG. 16

